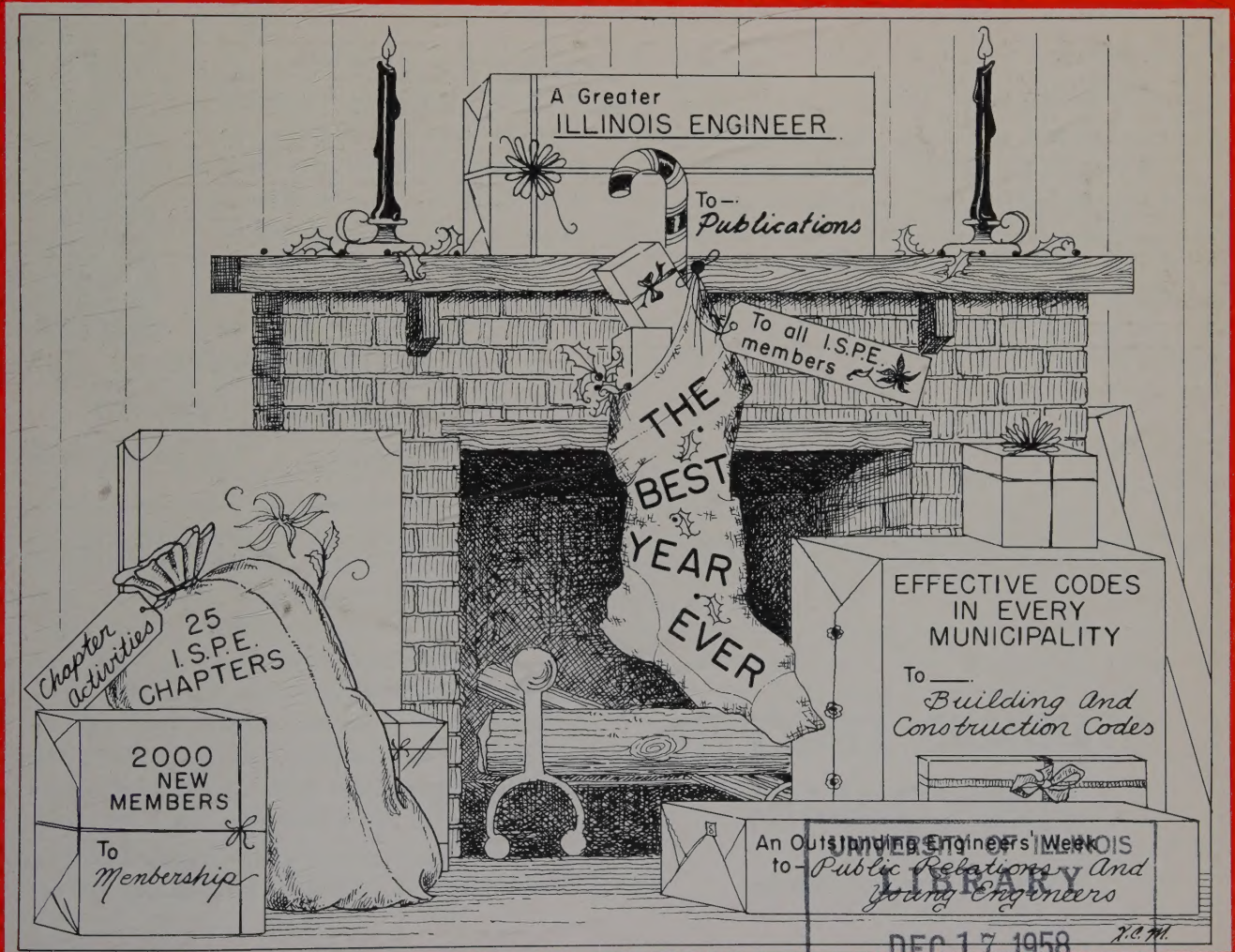




the **ILLINOIS ENGINEER**



Merry Christmas and a Prosperous 1959 to All!
CHICAGO

THE ILLINOIS ENGINEER,
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NATIONAL ENGINEER'S WEEK

February 22-28, 1959

"Engineering . . . For the Age of Space"

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PRESIDENT'S MESSAGE

By FRANK W. EDWARDS

A PROGRESS REPORT

"What about the future of ISPE? It depends on you!

This question and this answer appeared in the May issue of the ILLINOIS ENGINEER.

Now, near the close of the calendar year seems a good time to report progress, both positive and negative, toward our goals. Positive progress is a result of your effort.

The officers can accomplish very little themselves. Their function is to create the atmosphere, furnish the facilities, and administer the programs approved by the

Board of Direction and the members. These items come under the operations group of activities. They are not ends in themselves, but merely means for accomplishing our real goals in the professional and public relations fields.

What are some of the accomplishments in the operations area? First, the headquarters office has been reorganized. An executive-secretary, a lawyer by

training with experience in the legal profession and in association work, has been retained to head the permanent staff and edit the ILLINOIS ENGINEER. A full time office manager assists the executive-secretary. With the help of this staff pertinent material in the files at headquarters has been classified and made available for personnel of appropriate committees in an effort to eliminate duplication and wasted effort. The staff has many additional accomplishments to its credit.

The expanded budget adopted in April has proved to be conservative. Income as of November 1, exceeded the estimate for the calendar year presented to the first meeting of the present Board. The ILLINOIS ENGINEER is well on the way toward being self-supporting by advertising income alone. The executive secretary is responsible for this accomplishment.

Four new chapters will be completely organized by the end of the calendar year. Each is attracting a host of new members. This fact, coupled with an increase of more than 400 new members throughout the state, should be gratifying to all among you who are working so energetically for the best interests of the profession. Soon ISPE will be eligible for a fourth National Director. These accomplishments result from the combined efforts of individual chapters and the chapter activities and membership committees.

The proposed constitution and by-laws published in this issue reflects the expanded activities of the society. Additional elected officers are provided to help carry the administrative load. Democratic principles are incorporated further by requiring at least seven chapters to be represented on the nominating committee. Other changes eliminate discrepancies between the state and national constitutions and provide a streamlined document for guiding our efforts. The constitution and by-laws committee has worked long and hard to present this new document to you.

Next, what are some of the accomplishments in the professional area? The life blood of our society is embodied in the professional group of activities. Steps have been taken in the education field, in the ethics and practice area, in fees and salaries, in legislation, and in young engineers' activities. Each committee in this group has undertaken specific assignments.

Completed assignments can be reported only in the ethics and practice area at this time, although very important accomplishments are anticipated soon in the other areas. The Society had the sad experience of expelling one of its members for unethical conduct. The necessity for action of this type is regretted but ISPE must not shirk its duty and responsibility to the profession as well as to the general public.

Other action left little doubt that ISPE intends to enforce the Canons of Ethics adopted by most engineering societies in the country. Specific cases of alleged violations are being studied continually and further action is contemplated. The ethics and practice committee is a credit to ISPE.

Finally, what are some of the accomplishments in the public relations area? Here outstanding jobs have been and are being done in the publications area and in developing a sound program for building and construction codes. The public relations committee is actively at work and important assignments have been undertaken by other committees in this group.

This is only an outline of what is being done. Many items and many details could be added. It is hoped this record of some of the progress to date will encourage each of you to increase your efforts toward betterment of the profession.

Nervous Suitor: "Sir, er—that is. I would like—to er—that is, I mean I have been going with your daughter for five years—"

Father: "Well, waddye want—a pension?"

P. E. ACT STANDS FIRST COURT TEST

The People vs. Jack Sterling is an important case to Illinois engineers and the Illinois Professional Engineering Act, approved in 1945. This case, which was heard and decided on November 13 in Municipal Court Branch No. 27 of the City of Chicago before Judge Joseph A. Power, is the first time that the criminal provisions of the P. E. Act have been tested in court. By virtue of the decision given by Judge Power, the Illinois Professional Engineering Act takes on real meaning and should be an encouragement to all Professional Engineers in the state and a warning to those who would be engineering "con" men.

The case developed early this year when Mr. Lloyd McCahan, a businessman, read an advertisement in a Chicago newspaper which offered engineering services, particularly in designing machines and producing models for prospective machinery buyers. Mr. McCahan had developed a plastic mitten for a special use and had standing quantity orders, providing he could develop a machine which would mass-produce his product.

He called in response to the advertisement and was put in contact with Mr. Sterling, who, according to the testimony of Mr. and Mrs. McCahan, represented himself as a Registered Professional Engineer with considerable experience in designing machines of the nature that Mr. McCahan needed. Whereupon they entered into a contract for the design and delivery of a machine which would mass-produce the plastic mitten, for which McCahan was to pay \$2,000. A time for delivery of the



Shown outside the Chicago Court Room are interested parties in the Professional Engineering Act case November 13th. Left to right: Norman A. Miller, Vice-President Chicago Association Consulting Engineers; George Chlebicki, Vice-President Chicago Chapter I.S.P.E.; Howard De Pree, Attorney and P.E.; Anthony Zummer, Attorney and P.E.; and Ralph H. Eisendrath, Attorney for the defendant.



Assistant State's Attorney, Michael C. Greenfield, left, shown with Judge Joseph A. Power. Judge Power's decision was precedent as it was the first court test of the 1945 Illinois Professional Engineering Act.

machine was specified; upon expiration of the period Mr. McCahan called upon the Defendant Sterling to deliver the machine, whereupon Mr. Sterling stated that it would be delivered soon—that it was necessary for him to get component parts from New York. An extension was given, and delivery was made in April of this year.

The machine did not work as was specified (in fact the electrical wiring burned out at the first attempt to use it), and Mr. McCahan started an independent investigation of Mr. Sterling and the Manufacturing Engineers Associates, the company which purportedly built the machine. Mr. McCahan was referred to the Chicago Chapter of the Illinois Society of Professional Engineers, and President Linas Brown referred the matter to Tony Zummer, Chairman of the Ethics and Practices Committee for the Chicago Chapter. Zummer, a lawyer and a Registered Professional Engineer, with Howard De Pree, another attorney and Registered Professional Engineer in the Chicago Chapter, began gathering evidence which they submitted to the State's Attorney for Cook County, Benjamin A. Adamowski. The State's Attorney's office cooperated fully in following through on the complaint, which was signed by Mr. McCahan, and after two delays by the Defendant the case was heard. Adamowski assigned the case to an able assistant, Michael C. Greenfield, who presented the case before Judge Power.

The evidence showed that Mr. Sterling had operated two engineering firms—Sterling Engineering Company and Manufacturing Engineers Associates. In Mr. Sterling's testimony, he stated that he was not a Registered Professional Engineer, but that he was a sales engineer; that he had merely taken Mr. McCahan's order for the machine and that he himself did not design or in any way build the machine, but had contracted with another firm to build it for him.

(Continued on next page)

Drawings were presented in court which Mr. Sterling had signed which were drawings of the machine to be manufactured for Mr. McCahan.

Judge Power found Defendant Sterling guilty of violating the Professional Engineering Act and fined him \$400 plus costs. In his decision the Judge stated, "It is immaterial whether the Defendant Sterling designed and built the machine. The controlling factor is that he did lead the Complainant and client, Mr. McCahan, to believe that he was an engineer capable of designing and building a machine which the Act requires a person to be properly registered and licensed before they hold themselves out to the public to do such work."

Recognizing that this case was decided in a Municipal Court, it is, however, a monumental decision until such time that this case or any other may be carried to the State Supreme Court for a final determination relative to the meaning of the Engineering Act. All professional engineers can now be assured that, if future violations are brought to the attention of proper authority, justice will prevail as it prevailed in this initial case in Judge Power's court.

Every member of I.S.P.E. owes a debt of gratitude to the fine preliminary work done by Tony Zummer and Howard De Pree, as well as the excellent presentation of the evidence by Assistant State's Attorney Greenfield.

Professor Moore Honored

For research which at a total cost of \$692,666 has saved American railroads \$102,000,000 and is saving \$9,000,000 more every year as well as contributing immeasurably to safety, the American Railway Engineering Association and American Iron and Steel Institute have joined to thank the University of Illinois and the professor responsible.

He is Prof. Herbert F. Moore, now retired and 83 years old. The two associations (on Nov. 7) presented a permanent bronze tablet in his honor to the university.

AREA directors met on the campus at Urbana-Champaign to take part in the presentation luncheon with AISI representatives and other leaders in engineering, research, and education.

In 1931 some 12,000 railroad rails were failing in a year from transverse fissures, sometimes called "rail cancers" because they spread unseen inside the metal until the rail broke or was so weakened it had to be removed from service. A joint AREA and AISI committee brought the problem to Prof. Moore, widely known for his studies of the properties of metal and of its so-called "fatigue" failures. Prof. Moore found the cause of transverse fissures to be microscopic "shatter cracks" created by gas trapped in the metal. He proved that controlled cooling allows the gas to escape, preventing formation of shatter cracks.

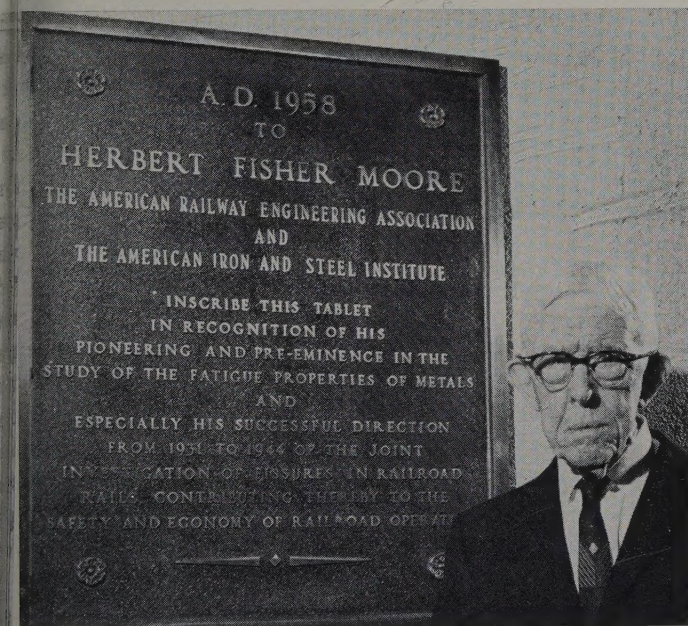
He had told the joint committee chairman when the problem was presented, "The difference between pure and engineering research is that pure research is finished when the problem is solved, but engineering research is not finished until the findings are put into practice."

These findings were put into immediate practice. Of millions of tons of rail rolled since, not a one properly cooled has failed from "cancer." Every suspected rail failure has been brought to the University of Illinois to determine what did cause it to fail.

The plaque honoring Prof. Moore was presented at the luncheon by Ray McBrian, AREA past president, and director of research, Denver and Rio Grande Western Railroad. "Prof. Moore," McBrian said, "brought the need for research to the front in the railroad field. Research on railroads will be needed more and more in the future. I present this plaque in honor of Prof. Moore's great service to the railways of America."

Outside his professional field Professor Moore has been active in campus dramatics, music, and religious organizations. To each of these activities he brought a fresh view point and thought projecting suggestions. He is a member of numerous technical societies and has been a member of the Illinois Society of Professional Engineers since 1924.

God is never still. In prayer it is not we who momentarily catch His attention but He ours. So when we fail to hear His voice it is not because He is not speaking so much as that we are not listening.—CHARLES BRENT.



Professor H. F. Moore with bronze tablet honoring him installed in University of Illinois' Arthur Newell Talbot Laboratory at Urbana-Champaign. The tablet says, "A. D. 1958 to Herbert Fisher Moore the American Railway Engineering Association and the American Iron and Steel Institute inscribe this tablet in recognition of his pioneering and pre-eminence in the study of the fatigue properties of metals and especially his successful direction from 1931 to 1944 of the joint investigation of fissures in railroad rails, contributing thereby to the safety and economy of railroad operation."

—From Public Information Office, University of Illinois

CAREER SATISFACTIONS IN ENGINEERING

Dr. Clark A. Dunn, P. E., President of the N.S.P.E., met three speaking engagements in the Chicago area the 12th, 13th and 14th of November. On the 12th he spoke to the student chapters of Northwestern University Technical Societies; on the 13th, Dr. Dunn met with the Chicago Chapter of the I.S.P.E. at the Chicago Engineers' Club; and on Friday the 14th, he addressed the new Northwest Suburban Chapter at Des Plaines.

Preliminary to his principal discussion on career satisfactions, Dr. Dunn touched on some important matters relative to the N.S.P.E. program. On the matter of a possible dues increase, Dr. Dunn related that it was necessary to have additional funds to provide a greater variety of services which the membership is requesting. He gave examples of two pieces of legislation in the last Congress which N.S.P.E. was highly successful in its efforts—the Kennedy-Ives Bill, which was repugnant to the engineering profession, was shelved in the House and did not come to a vote; the Jenkins-Keogh Bill, which was a tax measure, although not passed, was the only tax measure which was brought to a vote. The effort of N.S.P.E. in getting it to a vote was a real accomplishment. Dr. Dunn predicted that the subjects of the two measures would undoubtedly come up in the forthcoming 86th Congress and that N.S.P.E. was getting prepared for an all-out drive to stop the undesirable features of the Kennedy-Ives Bill and to get through the favorable parts of the Jenkins-Keogh Bill.

He emphasized that N.S.P.E. could get along on any amount of money that is provided; however, the services given to the membership will be commensurate with the amount of funds available.

The N.S.P.E. is striving to appeal more to engineers employed in industry to bring about a better understanding. Dunn has appointed a President's Advisory Com-

mittee of distinguished engineers in industry who are in the top management bracket to assist in better orienting engineers in industry to the needs of their affiliation with the professional engineering society.

Speaking on the career satisfactions of engineering, Dr. Dunn stated that, to get the major satisfactions of life, it is necessary to participate in an organization which provides similar objectives. It is worthwhile and desirable for us to work with a group which has some of the same problems and hopes as ourselves. He added that certain people get enjoyment only out of the physical things of life, but to gain real career satisfaction, one must get enjoyment from all types of activities, such as community service, music, art, or any number of activities other than those strictly connected with our work. The need for money for a livelihood and to get many of the enjoyments of life many times causes us to overlook certain satisfactions that can be enjoyed to a great degree.



Dr. Clark A. Dunn, P.E., President of the NSPE (left) greets Arthur M. Kaindl, who holds Illinois P.E. Registration No. (right), while Mitchell J. Alster, P.E., makes the introduction.



Dr. Clark A. Dunn, P.E., President of the NSPE, welcomes four Honorary Student Members of the ISPE, recently elected. Left to right: Warren Miner and Robert D. Wilson of Northwestern University; Dr. Dunn, Richard Wetzels and Joseph Difiglio of Illinois Institute of Technology.

President Dunn pointed out that being elected to an organizational or a community office provides satisfaction; the winning of an award for outstanding achievements in one's profession provides an enjoyment and satisfaction; contributions to community funds, church activities, and many other affairs provide enjoyments of life which are much more satisfying than just the purely physical things.

Working in an organization such as N.S.P.E.-I.S.P.E. is a means of getting greater satisfaction out of our career. In participating in organization work, Dr. Dunn suggested that the individual had an opportunity to become acquainted with many other viewpoints and to see things with different expressed values, which causes us to be more tolerant. If we cannot understand the other person's viewpoint, we have lost a great value of satisfaction in our career. If we have the attitude that the other fellow should change to conform to our ideas

When there is only one thing wrong—and that is that we are wrong. If we attempt to change our viewpoints to coincide a little more with the viewpoints of others, then we are in a much better position to change the other fellow. There is only one person that we as an individual can change, and that is ourselves.

He emphasized the fact that we cannot improve the profession by working alone; it is absolutely necessary to work together.

In closing, Dunn hit the importance of participating in organizations by quoting from "The Lone Wolf":

"Like some of his fellow engineers, Joe was the victim of a defense cutback. After years of hearing about the shortage of engineers, he suddenly found himself part of an apparent surplus.

"An attractive job opening, for which he was well qualified, came to his attention. In the course of interview he made a particular point of inquiring about company policy toward the professional status of engineers. In turn he was asked about his own professional activities—to what societies he belonged and the extent of his participation. The fact that Joe was not a member—active or inactive—of any professional engineering society placed him at some disadvantage in the ensuing discussion.

"Society membership does not in itself create a professional man, any more than does education or experience. But it does symbolize an attitude.

"The nonjoiner's attitude may be compounded of procrastination and a 'what's in it for me?' viewpoint. Thereby he might appear to class himself with the followers rather than the leaders.

"We'll be the first to agree that existing professional societies fall short of perfection. But when membership in a society totals less than 25 per cent of eligible engineers in the branch it serves—a not uncommon ratio—whose fault is it if the society appears to be dominated by a nonrepresentative group?

"The engineer who is registered and belongs to one or more professional societies has stood up to be counted as a professional man. How professional he actually is depends, of course, on his participation in furthering the aims of the profession. His society simply provides the machinery for such participation, in addition to opportunities to widen his horizons and his acquaintance-ship.

"Since his interview Joe has been much less vocal on the subject of professional recognition. He realizes that, as a lone wolf, he should not expect to hitch a free ride to professional status on the shoulders of others."

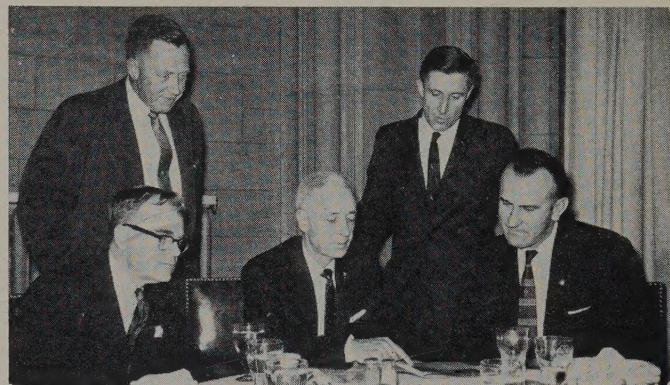
NEWS OF THE ENGINEERING PROFESSION

Dire predictions and rumors concerning the so-called engineering shortage are a disservice to the nation and the engineering profession because they are not based on sound analysis.

Misguided neutrality on the part of industrial management regarding the unionization of engineers could result in a complete breakdown of the concept of professionalism in industry.

These positions and others taken by the NSPE Board of Directors at the fall meeting in San Francisco, October 23-25, represent actions by the group on a broad front.

The Board issued a plea to the nation to stop "adding fuel to the shortage fire." The officials called upon all communications media to "weigh carefully the facts, and soberly analyze those facts, before starting a new wave of publicity to the effect that the nation faces a severe engineering manpower shortage."



Dr. Clark A. Dunn, P.E., President of the NSPE, meets with prominent engineers of the Chicago Chapter of the ISPE at the University Club, Chicago, during a three-day visit to the area on Nov. 12, 13 and 14. Seated, left to right: Dudley Terrill, Dr. Dunn, and George Chlebicki. Standing: E. M. Fucik and Linas Brown, Chicago Chapter President.

The National Society directors urged that all those who intend to speak or publish articles on the subject of engineering manpower first consider the following four points:

1. Engineering school enrollments are at an all-time high and are continuing to increase without artificial stimulation.
2. Action which may force-feed students into engineering curricula without adequate assistance to the over-burdened engineering schools can only harm the cause of engineering education.
3. The current engineering need in industry and advanced technology is one based on qualitative, rather than quantitative factors. The serious technological problems facing the nation cannot be resolved by merely adding to the number of engineers.
4. Greater utilization of existing engineering manpower is recognized by all serious students of our manpower problem as a first priority item.

After Board action on a unionization report, Dr. Clark A. Dunn, Society president, Stillwater, Oklahoma, said in an interview that the "neutral attitude taken by management in some firms when faced with an election among engineering employees on the question of union representation is actually an abdication of management's responsibility in preserving the distinction between professional and nonprofessional services."

(Continued on next page)

Dr. Dunn pointed out that "such an abdication of management responsibility has led to a situation in the aircraft and other industries here on the West Coast in which many young engineers have never heard an expression of support concerning professionalism from their employers."

Treating a full agenda at the two-day meeting, the Board heard progress reports on these additional items:

The Consulting Engineers' Functional Section appropriated \$2,000 to assist in promoting the passage of the Jenkins-Keogh Bill at the next session of Congress. Further, the Section reported that a compilation of fees was now nearing completion. In other action the Section reported changes in the liability policy now being made available to members of the NSPE by the Victor O. Schinnerer Company.

The Engineers-in-Industry Subcommittee proposed that once each year the NSPE select an industrial firm which has contributed more than any other toward the advancement and improvement of the engineering profession through its employment practices, and present the firm with an award. The Board approved the recommendation and the first award is scheduled to be made in 1960.

In a report of the Engineering Scholarship Committee, Chairman Leland S. Hobson, Manhattan, Kansas, asked that all state presidents act now to participate in the Armco-NSPE-Civil Engineering scholarships which are presently available. A memorandum has gone out to the state officials giving the details. Scholarships are now available for the 1959-60 school year.

By action of the Board, Alaskan engineers from the forty-ninth state, were accepted as a member state society of the NSPE.

Time

Let us take time to know the thoughts of men,
Time to know beauty; and time to feel again
Calm and content of soul—the quiet power
Of meditation through a gentle hour;
Time for the book, the song, the golden weather
Made for the happiness of friends together.

L. K. SILLCOX

Best Wishes for A Happy Holiday



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PEORIA, ILLINOIS

DIRECTORS' REPORT

National Society of Professional Engineers
San Francisco, California—October 23-25, 1958

By MELVIN E. AMSTUTZ

One of the highlights of the meeting was the admission of Alaska as the 47th Member Society.

Preparations are presently under way for the admission of the State of Oregon as the 48th Member Society. It appears that they will be ready for acceptance at the meeting to be held in Birmingham in February. NSPE is presently organized in the Canal Zone, District of Columbia and Puerto Rico, and in all but five states. The admission of Oregon will leave only Kentucky, Maine, New Hampshire and Vermont without state organizations. Mr. Frank Lerchen reported that all professional engineers in the Canal Zone are members of the Society. The Membership Committee's report was very encouraging indicating an increase of 3000 new members and 600 new EIT's. The new Introductory Plan which has been adopted by ISPE is being taken up by the various State Societies and it is felt that this will add a great impetus to the drive for new members.

The AIEE Unity Plan was given a serious setback at the recent meeting of the Presidents and Executive Secretaries of the Founding Societies as reported by James N. Landis, President of the American Society of Mechanical Engineers. Mr. Landis addressed the Board at a luncheon meeting and said that the plan had been turned down and that ASME was proposing an alternate unity plan. This proposal, in brief, recommends the formation of a new organization to be known as the American Engineers Association, to be made up of all of the various engineering societies, including NSPE. It would appear that such an organization would merely duplicate the efforts of NSPE and would serve no useful purpose. In the discussion that followed Mr. Landis' talk it seemed to be the consensus of opinion that NSPE would continue to be interested in the Functional Plan developed by AIEE which provided, basically, that technical problems would be handled by EJC, Educational problems by ECPD and professional problems by NSPE. If NSPE continues at its present rate of increase, it will, to all cause and effect, become the unity organization without any further changes.

The film "Building for Professional Growth" was shown. This is a 20-minute, 16 mm film covering NSPE activities and is available to all chapters at a rental fee of \$10.00. It is narrated by network TV announcers and includes scenes photographed at Washington, D.C. Headquarters Building and at Chapter, State and National level meetings. This film is informational and educational and it is recommended that every chapter avail itself of the opportunity to show this film.

In several areas inroads are being made by labor unions in organizing Professional Engineers, both in industry and in governmental units. Professionalism and unionism are incompatible concepts. It is vitally important

(Continued on page 7)

GUATEMALAN ENGINEER VISITS ISPE HEADQUARTERS

Mr. Manuel Medina, Chief of the Department for Water Supply and Sewerage for Guatemala was a recent visitor to the ISPE Headquarters office in Springfield.

Mr. Medina spent several weeks in Illinois studying Illinois methods of development of public water supply systems. In visiting this country to study the methods in Illinois he was particularly interested in the working relations between consulting engineers, official state agencies, and municipal agencies in carrying out the overall program of water supply and sanitary developments.

Mr. James D. Williams, P.E., and Member of the Capital Chapter of the ISPE, was instrumental in Mr. Medina's selecting Illinois for his visit to the United States. Mr. Williams, who is now with the U. S. Public Health Service in Guatemala City, is a consultant to Mr. Medina's office.



Shown on left is Leverne D. Hudson, ISPE Assistant to the President, discussing with Senor Manuel Medina of Guatemala some of the methods of operation at ISPE Headquarters.

Mr. Medina gave some interesting comparisons of engineers in his country to those in Illinois. To become a recognized engineer in the Central American country a person must study for six years in an engineering college. One of the six years is devoted to practical applications by on-the-job training. This year of practical application is done under the direct supervision of professors in the college and city engineers. Upon completion of university training and upon receipt of a degree a license is issued to the graduate engineer.

The law requires that every engineer must be licensed and belong to the College of Engineers before he can practice his profession. The College of Engineers issues the licenses and administers the professional program for the engineers. A Director, who heads the College of Engineers, is elected by the engineers themselves. The College of Engineers is not a state controlled institution.

Also, Mr. Medina stated that there is a separate private society of engineers in his country. It is optional on the part of the individual engineer whether or not he belongs to the society.

Mr. Medina stated that prior to graduation it is necessary that the engineering student write a thesis on a special phase of engineering, and then as a prerequisite to receiving his degree and becoming duly licensed he must appear before a board of five members who question the student in great detail regarding the thesis. The engineering student must be prepared to explain how a bridge, or a building, or any engineering work, described in his thesis would be done.

Upon graduation the engineering graduate selects two sponsors, who in effect are professional "god-fathers" to the young engineer. These sponsors need not be engineers; but may be any professional person, such as, a doctor, a lawyer, or an engineer. The graduation ceremony is quite a celebrated affair, which was described by Mr. Medina as a festival.

The dues of two dollars per month paid by the engineers in Guatemala is comparable to that paid by professional engineers in Illinois.

Guatemala is one of the many countries participating in the United Nations world wide program for public water supply development.

Mr. Leverne Hudson, Regional Sanitary Engineer, Department of Public Health, State of Illinois, escorted Mr. Medina to several Illinois development projects and brought him to visit the ISPE Headquarters.

DIRECTOR'S REPORT

(Continued from page 6)

that NSPE and the member State Societies and Local Chapters be aware of the dangers inherent in attempts to unionize Professional Engineers.

The constant expansion of activities of NSPE as well as the current inflationary trends have increased operational costs of the Society. The "Voluntary Fund Campaign" under the direction of the Executive Committee of NSPE, is well under way. During the first two weeks the sum of \$7500.00 was collected—the ultimate goal is \$150,000. I shall not go into details regarding this campaign as every member has received a complete brochure. It is hoped that Illinois will support this Campaign and that our membership will not delay in forwarding their contributions. The successful conclusion of the project will enable the Society to provide not only extensive services to its membership, but also will enable it to develop a well-rounded program of which all of us can be proud. Let's do our part now!

"The man I marry must shine in company, know music, tell jokes, sing, dance, and stay home evenings."

"You don't want a husband—you want a TV set."

SUMMARY OF ISPE BOARD MEETING

The fall meeting of the Board of Direction was held November 1 at the Abraham Lincoln Hotel, Springfield, at which time it took action on a number of important matters related to the future operations of the Society.

1. An interim budget for the operation of the Society during the first four months of 1959 was approved. The budget, which was submitted by the Finance Committee, provides for \$27,805 net income and expense for the Society. It was pointed out that an overall gross income and disbursements in the amount of \$54,885 was reflected by virtue of National and Chapter dues being collected in a combined payment through the ISPE.

2. The Board voted the approval of 263 Introductory Members into the Society and 25 regular applicants.

3. The Board approved action to request Governor Stratton to call a conference to study means of strengthening the Illinois Professional Engineering Act to provide for better enforcement.

4. Reaffirmation of a strong stand against unfavorable provisions of the Kennedy-Ives bill that might be introduced in the forthcoming 86th Congress.

5. The Board reaffirmed its position on nonacceptance of applicants as National members persons who are not registered. It was pointed out that the National Society has expressed a policy that "the only time an engineer can be a member of the professional society without registration is when the law for some reason has failed to provide the mechanism for him to become registered." The Illinois Act provided that any qualified engineer could have become registered without examination during a specified time after the enactment of the statute. If anyone who was eligible to become registered failed to do so, the Society will not now accept them as National members. However, any engineer who is properly qualified as such may become members either as Affiliates or Engineers-in-Training.

6. Three charters were granted and Constitutions and Bylaws approved for a six-month period for the North Shore, the Northwest Suburban, and the Sauk Trail Chapters. The Executive Committee was given authority to approve the Constitution and Bylaws for a six-month period for another chapter in the west suburban area of Chicago when application is made to the Society.

7. Approval was given to the application of Dr. Max Suter for Life Membership in the Society.

8. Honorary Student Memberships were voted to two engineering students from each of three schools—IIT, Bradley, and Northwestern.

9. The Board voted to hold its 1959 Annual Convention at Rockford on April 30, May 1 and 2, with headquarters at the Faust Hotel.

10. A report from C. T. Morrisett, Chairman of the Building and Construction Codes Committee, was ap-

proved and \$25 was authorized for the use of the Committee for the remainder of 1958.

11. The proposed draft of the Constitution and Bylaws was approved with suggested changes, and the Constitution and Bylaws Committee was instructed to prepare the draft for inclusion in the December ILLINOIS ENGINEER for the consideration and vote of the membership. Ballots are to be sent with the dues statements on or soon after December 1. A change was made in the proposed new Constitution to change the Affiliate membership limitation from 10% to 20% of the Corporate membership of each chapter.

12. A resolution providing for the transfer of the Society's bank account from the First National Bank of Champaign to the Illinois National Bank of Springfield was approved.

13. Routine reports were made by each of the officers present, as well as reports of activities by the Executive Secretary and the Office Manager. A report was given by National Director C. J. McLean on the fall Board Meeting of the National Society in San Francisco. (Reports of the National meeting are elsewhere in this issue and also will be in the AMERICAN ENGINEER.)

14. The Board authorized the notification of members of ISPE that they must advance in grade if they are eligible to do so, or transfer to Affiliate membership if they have been in the Junior or Engineer-in-Training grade for ten years.

The only liberty is where God has sole possession of the heart, and where it is wholly subject to His Grace, wholly subject, and yet in perfect liberty!—J. N. GROU.

NATIONAL ENGINEER'S WEEK

February 22-28, 1959

"Engineering . . . For the Age of Space"

IRIONS'

Season's Greetings
from . . .

Ready-Mix
Concrete

State
Inspected
Sand & Gravel

Lite Weight
&
Concrete Blocks

Irions . . . The Strongest Name in Concrete

Chillicothe Gravel Co.
Quality Concrete Co.
Concrete Block Co.

Plants At
PEORIA, ILL.
CHILLICOTHE, ILL.

— 2000 —

Dear Fellow Member:

Our Society is the only Engineering Society which devotes its entire effort to the professional aspects of engineers.

Our Society is the only Engineering Society which possesses a "Grass Roots" character. The voice of every member is heard.

The Membership Campaign Progress Chart in the November issue of ILLINOIS ENGINEER graphically indicates the favorable reception of these principles by the number of newly registered Professional Engineers who have accepted our offer of an Introductory Membership.

Engineers are seeking for such an organization. Have you presented our Society to an engineer friend? If you inform him of what the Society is doing, the Society will sell itself.

YOUR MEMBERSHIP COMMITTEE

— 2000 —



Amvit is made from a plastic which has many characteristics similar to rubber. It is pliable, permitting deflection without leakage, can absorb shock and vibration.

Streator's NEW PLASTIC Amvit jointed clay pipe chosen for Glen Ellyn sanitary system

*Outstanding mechanical joint on longer
Streator Clay Pipe one of city's lifelines*

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STOP root trouble. Insist on Streator Clay Pipe with the new plastic joint. Low cost, trouble free, the joint is on the pipe delivered to the job from Streator's nearby modern plant.

For more information, see your supplier or write or call Streator Drain Tile Company, Streator, Ill.



ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, Inc.

817 Myers Building, Springfield, Illinois

Date

To the Board of Direction of the
Illinois Society of Professional Engineers:

I hereby apply for admission to the Society as a
National, State, E-I-T, or Student
member. If admitted, I agree to comply with the terms of the Constitution
and the Code of Ethics of the Society, and wish to be enrolled in the

.....Chapter.

FOR OFFICE USE ONLY

Appl'n Recd.

Amount Enc.

Ref. Written.....

Ref. Recd. 1..... 2..... 3.....

Presented to Bd.

Elected.....

Notified.....

I. ALL APPLICANTS complete the following ten spaces:

1. Full Name..... Name of Spouse.....
Last First Middle

CHECK PREFERRED
MAILING ADDRESS

2. Residential Address..... Phone.....
Street City State

3. Business Affiliation..... Position.....

4. Business Address..... Phone.....
Street City State

5. Registration..... Reg. Number.....
(Type of Certificate: Prof. Eng., Struct., etc. State Issued)

6. Engineering Field.....
(Civil, Electrical, Mechanical, etc.)

7. Technical Society Affiliations and Grade of Membership

8. Birth.....
Date Place Age Sex

9. Education.....
Years School Date of Graduation Degree Obtained

10. Recommended by.....
Signature.....

II. If you are NOT REGISTERED as a professional engineer, structural engineer or an E-I-T, complete the balance of the application form.

Names, addresses, and professional connections of three persons who may be consulted concerning my qualifications (preferably professional engineers who are members of this Society; action will be expedited by accompanying this application with the letters of reference).

1.
Name Title Address Member NSPE-ISPE

2.

3.

Engineering Testing in a Mobile Laboratory*

* Presented at American Road Builders Association Sixth Annual Highway Conference for County Engineers and Officials, Jamesha Lake, New York.

THOMAS J. McNEIL, Vice President,
Soiltest, Inc., Chicago, Illinois

Almost everybody has been able to measure in terms of his own work the increased necessity for engineering testing in connection with programs of road building, bridge and dam construction, and airfield and irrigation projects. The post war years have seen more cognizance taken of testing and quality control by civil engineers than had the previous 25 years period. As a greater appreciation of the need for soil foundation work and quality control of building materials grew, so did the availability of testing equipment and trained personnel.

Today, there is a new concept in engineering testing—the concept of greater mobility, closer control, and faster results. Testing, in effect, must move to the job site to squeeze the greatest economy and the best control from engineering projects. To be effective in the analysis of compaction, for example, the results of a day's work should be known before the equipment leaves the site. To effect greatest control and the most rapid progress in concrete quality control, cylinders should be tested as close to the job as possible, with a minimum of disturbance due to transportation to central testing laboratories. Qualitative analyses of asphalt mixes are most valuable when obtained as soon as possible after the asphalt is delivered to the job site. In a word, quality control is most valuable and most economical when determined at the location of the job.

This concept of mobility in lab testing is not a recent development. Since before the war, a variety of efforts have been made to effect mobility in testing.

One of the earlier mentions made of a portable lab was made in *Soil Cement News* for September, 1943 where a portable field lab for control of operations on an airfield built in Van Horn, Texas is described.

The British, for an example, report in the magazine *Roads and Road Construction* for June 1, 1945, the description of a mobile laboratory for testing concrete which was released by the Road Research Lab of the Department of Scientific and Industrial Research, in Middlesex.

In April, 1947, the director of Public Works of Columbia, Georgia, J. M. Graddy, announced through the pages of the *American City Magazine* the use of a portable soil testing lab for inspection control of the soil cement street improvement program. Tests included soil sieve analysis, moisture content, density determinations at optimum moisture content, and other tests.

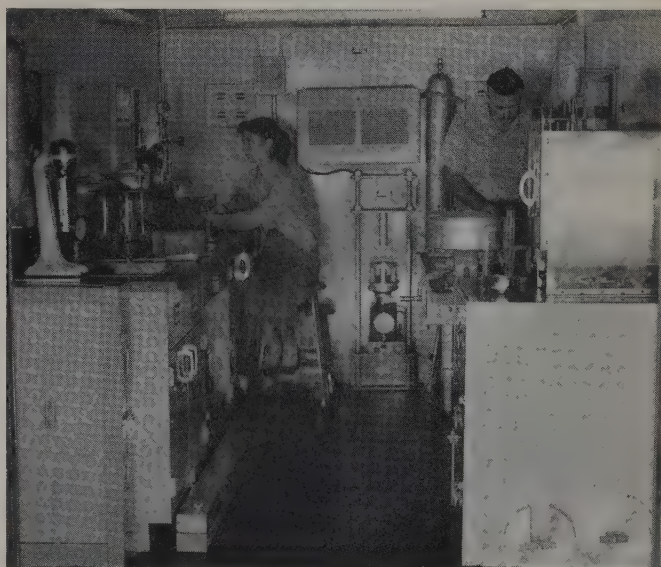
C. D. Reed, mechanical engineer and lecturer in civil engineering at the University of Liverpool reports in *Civil Engineering and Public Works Review* for May,

1953, on the mobile civil engineering lab for research projects and student demonstrations.

The State Highway Commission of Wisconsin, in the December 1, 1955 issue of the *Western Builder* reports on the enthusiasm of contractors, engineers, and county and state highway officials in the saving of time effected by the use of a lab on wheels for testing bituminous mixtures used on the Wisconsin highway improvement projects.

The Corps of Engineers at Ft. Belvoir, Virginia has on prominent display a complete mobile laboratory in a 20 ton trailer body.

The Iowa State Highway Commission first built mobile labs in 1947 when they purchased three house trailers and equipped them for field work.



Interior of mobile laboratory showing large variety of engineering testing equipment mounted in a typical soil and asphalt lab.

Most recently, the Washington Asphalt Company of Seattle reported that their mobile lab has resulted in the saving of thousands of dollars in rejected materials. It raised the standing of a contractor, Walter W. Castner, in the estimation of state officials, because he demonstrated, by running his own tests in this lab that he knows what he is doing and wants to do the best job possible. It also gave the contractor's operating personnel a new familiarity with the terms and significance of specifications and a new consciousness of product and quality.

In a word, mobility in testing is not really new, but slow aborning.

As manufacturers, we have been supplying mobile labs primarily to the foreign market for the past eight years. There are two reasons for this greater market abroad. One, there is a definite lack of commercial testing labs overseas. Two, there is an urgent need for engineering

(Continued on next page)

testing in connection with the economic development programs being encouraged by the U. S. in the under-developed nations. Since many American engineers are consultants to foreign governments, their knowledge of the need of engineering testing creates a greater demand for testing labs than would normally be the case. The range of work necessitated mobility, and hence the portable field lab has been emphasized.



Mobile testing laboratory in use in Nicaragua in Soil Survey Work for highway design and construction.

However, today in the U.S. several factors have combined to give greater impetus to the acceptance and use of mobile labs here. First, there is a growing recognition of the value of, and need for, on-the-job testing and quality control. Next, the workload facing all construction agencies, because of the Federal highway program verges on being staggering: some 39,000 miles of new highways have now been authorized by the Congress and every mile must be subjected to a multiplicity of precise tests, both in foundation work and in materials quality control. The standards, therefore, that must be met by county engineers who will participate in the secondary road program along with state highway departments are more rigid than ever before. Likewise, contractors will be subjected to more rigid control simply because of the magnitude of the program and the care that must be exercised against both over and under design.

So, the use of mobile labs cannot but increase with this new program and greater appreciation of engineering testing.

At present, there is a mobile laboratory touring the U. S. on exhibit at state highway departments, universities, and at certain conventions. This is a trailer lab which is felt to be more functional in this country where good roads are fairly well distributed and where it is not considered too economical to tie up a truck mounted lab when it will sit for weeks and months in the same spot. The trailer under discussion is 30 feet long, and completely fitted out with a utility system that includes a power generator, running water system,

air compressor, air conditioner, space heater, and ice box. It is equipped with general lab apparatus including a dynamic sieve shaker, scales and balances, a lab oven, and a general range of glassware, thermometers, mixing bowls and various lab tools.

It also has an assortment of testing equipment for performing soil, concrete, and asphalt tests. The equipment that is fitted in a lab is dependent on the use for which it is especially intended. This depends on the engineer and the job.

The acceptance of this concept of a mobile testing lab was forcefully demonstrated during this tour of the United States when more than 800 engineers, state and county officials, contractors, architects, students, and teachers personally came to the lab to inspect its facilities. Time and again it was a visitor to the lab who pointed out the need that existed and the use that could be made of this testing concept. It underscored our belief, that mobile labs can be a valuable tool toward better engineering for the dollars spent.



In place density test of soil being performed outside of trailer laboratory.



Truck type mobile laboratory on testing location at sand and gravel and materials yard.

A LATE BULLETIN

An organizational meeting for the twentieth chapter of ISPE was held in Bloomington Monday evening, November 24. Sixty-five engineers responded to the invitation to attend this meeting. A great majority indicated interest in becoming Members of ISPE. A temporary committee was appointed to draft a Chapter Constitution and By-laws to be presented to the Board. A Petition was signed at the organizational meeting. The Constitution and By-laws and Petition will be presented to the Board at the January 10th Board Meeting for the Board's consideration in granting of a Chapter Charter to the Bloomington Area. Those appointed on the committee were Sam Wylie, Chairman, Lee Rhodes, Donald Ferguson, Howard Elder, and Jim Baker. The Central Illinois Chapter sponsored the new Bloomington Chapter organizational meeting.

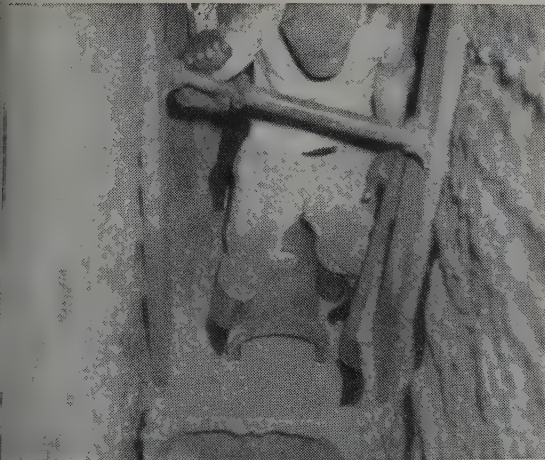
Perfection does not consist in the knowledge of God's Order but in submission to it. The Order of God, the Good pleasure of God, the Will of God, the action of God, Grace, all these are one and the same thing in this life. Perfection is nothing else than the faithful cooperation of the soul with the work of God. This ultimate purpose of our life grows and increases in our souls secretly and and without our knowledge.—DE CAUSSADE.

Merry Christmas and A Happy New Year

from

THE ILLINOIS NATIONAL BANK
OF SPRINGFIELDFifth at Washington Street
Springfield, Illinois

Member F.D.I.C.

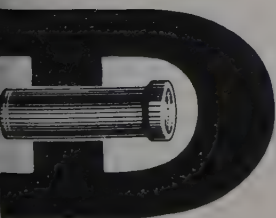
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Perfect joints in a wet trench
with the new Dickey Coupling

With the new Dickey PVC* Coupling, you can make completely watertight joints—even under a foot of trench water. Pipe installation is faster and simpler. No mixing compounds are required—just a firm push of the spigot into the bell joins the two pipe sections and the joint remains flexible. Fused to the pipe at the factory, it comes to you ready to use. This new Dickey Coupling—a result of years of research by the Dickey Co.—is different from any other method of jointing pipe. When you specify the new Dickey Coupling on Dickey Salt-Glazed Vitrified Clay Sewer Pipe, you know your sewers will be watertight, acid-proof and root resistant.

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fact-filled Bulletin 718

If it's made of clay it's good... if it's made by Dickey it's better

Final Draft of Proposed Constitution and By-Laws

In interpreting the constitution and its bylaws, the members should keep in mind that it is the policy of the Illinois Society of Engineers to function through its Board of Direction. To insure that the Board is truly representative of the majority of the Society's corporate members, the large majority of the Board consists of chapter representatives. Each chapter representative is elected by his chapter.

The Board is governed by the code of ethics, by the charter granted by N.S.P.E. and by this constitution and its bylaws.

The constitution is a working agreement of the corporate members as to what the members consider most important, and the bylaws provide the necessary facilities for the functioning of the constitution and the Society.

The long history of the Society shows that the Board has always been sensitive to the strong desires of the majority of the corporate membership.

Your Committee has prepared this draft for your consideration and recommends your affirmative vote for its adoption. The recommendations of many individuals have gone into this new document. It is hoped that the changes incorporated in this proposed Constitution and Bylaws will make the governing instrument more workable for day to day operation of the Society.

Submitted by
Constitution Committee
R. D. Collins, Chairman
J. R. Gardner
L. D. Hudson
A. C. Kessell
J. H. Morgan

CONSTITUTION

ARTICLE I—NAME

Section 1. The name of this organization shall be "The Illinois Society of Professional Engineers," hereinafter called the Society.

Section 2. The Society shall be incorporated as a non-profit organization under the laws of the State of Illinois.

Section 3. The Society shall be a member State Society of the National Society of Professional Engineers, hereinafter called the National Society.

ARTICLE II—OBJECTIVES

Section 1. The objectives of this Society shall be:

- Advancement of the public welfare.
- Advancement of the professional, social and economic welfare of the Professional Engineer and the Engineer-in-Training.
- Promotion of high standards of engineering education.
- Maintenance of high ethical engineering conduct and practices.

ARTICLE III—MEMBERSHIP

Section 1. Membership of the Society shall consist of **Corporate and Non-Corporate Members**.

- Corporate members** shall consist of **National, State, Honorary and Life members**.

- Non-Corporate members** shall consist of **Engineers-in-Training, Students, Affiliates and Junior Members**. The classification of **Junior Member** shall cease and reference to be eliminated from this Constitution on October 1, 1961.

Section 2. Membership classifications are defined as follows:

- A **National Member** shall be either,

- A person holding a valid license or certificate of registration as a Professional Engineer issued by the lawfully constituted registration board of any state; or
- A Registered Structural Engineer in the State of Illinois; or
- A person admitted to this classification prior to January 1, 1959.

- An **Engineer-in-Training** member shall be:

- A person holding a valid certificate of registration as an Engineer-in-Training issued by the lawfully constituted registration board of any state, or
- A person who has completed a four-year curriculum leading to a bachelor's degree in engineering from an accredited college of engineering and is employed in some form of work connected with the practice of professional engineering, or
- A person not over 35 years of age, who, in the opinion of the Board of Direction, possesses qualifications equivalent to those set forth in (2) hereof except for formal education, who has been employed in some form of work connected with the practice of professional engineering for at least four years and who declares his intention to accomplish registration within 2 years, or
- A person admitted to this classification prior to January 1, 1959.

- A **State Member** shall be a person who qualifies under one of the following categories:

- Is a non-resident of the State of Illinois who holds membership in the National Society through membership in another State Society.
- Is a registered land surveyor in Illinois.
- Was admitted to this classification prior to January 1, 1959.

- A **Student Member** shall be a person who is pursuing a full time engineering curriculum in an accredited college, who was admitted to this classification prior to January 1, 1959.

- An **Affiliate Member** shall be a person who was admitted to this classification prior to January 1, 1959, or shall be a person who has attained a position in his special pursuit qualifying him to co-operate with engineers in the advancement of professional knowledge and practice, but who is not eligible to be a Corporate Member. An affiliate at the time of his admission shall:

- Be not less than 35 years of age.
- Have been engaged in his special pursuit not less than 12 years.
- Have had responsible charge of important work for not less than 5 years.

Affiliate Members in any Chapter shall not exceed 20% of the total Corporate members of that Chapter. Where present Chapter Affiliate Members exceed this percentage, new Affiliate Members may be added until the above restriction can be complied with.

- A **Junior** shall be a person who was admitted to this classification prior to October 1, 1951.

Section 3. All **National Members** and **Engineer-in-Training Members** shall be members of the National Society.

Section 4. Only **Corporate Members** shall be eligible to vote in the Society.

Section 5. An **Engineer-in-Training Member** or a **Junior Member** cannot remain in their respective grade for more than 10 years.

Section 6. A **National Member** or a **State Member** who has attained eminence in the engineering profession or related sciences may be designated as an **Honorary Member** as provided in the laws.

Section 7. A **National Member** or a **State Member** may be designated as a **Life Member**, upon approval of the Board as provided in the Bylaws, provided he has (1) retired from active practice, (2) has been a **National** or **State Member** of the Society for 10 years or more, and (3) has submitted a written request to the Board requesting transfer to **Life Member**.

Section 8. **Honorary** members and life members shall be entitled to the privileges afforded them by virtue of their previous grade of membership.

Section 9. Membership admission or expulsion procedures shall be governed by the Bylaws.

ARTICLE IV—OBLIGATIONS AND PRIVILEGES

Section 1. All members shall adhere to the code of ethics of the Society and the canons of ethics for engineers adopted by the National Society.

Section 2. All members of the Society, Corporate and Non-Corporate, shall have the right to vote in the Chapters and to serve on Society and Chapter Committees. All members of the Society, Corporate and Non-Corporate, except Affiliates, shall be allowed to display the insignia of the Society.

Section 3. **National Members** shall have the exclusive right to serve as officers of the Society or as Members of the Board of Direction of the Society or National Society; and, they may also serve as officers of any Chapter. **State Members** shall have the right to serve in any Chapter capacity except that of Chapter Representative. **Engineer-in-Training Members** may hold the offices of Secretary or Treasurer or Secretary-Treasurer.

ARTICLE V—DUES

Section 1. Annual dues shall be as follows:

- (a) **National Member**—National dues plus \$10.00 State dues and \$5.00 Chapter dues.
- (b) **Engineer-in-Training Member**—NSPE Junior Member dues plus \$6.00 State dues.
- (c) **State Member**—\$10.00 State dues plus \$5.00 Chapter dues.
- (d) **Student**—\$2.00 State dues.
- (e) **Affiliate**—\$20.00 State dues plus \$5.00 Chapter dues.
- (f) **Junior**—\$10.00 State dues.
- (g) **Honorary and Life Members**—No State dues.

ARTICLE VI—ADMINISTRATION

Section 1. The Society shall be administered by a Board of Direction hereinafter called the Board. Within the provisions of this Constitution the Board shall have the full authority and power of the Society between annual meetings.

Section 2. The Board shall consist of the President, three Vice Presidents, the Secretary, the Treasurer, the latest available Past President, the National Directors representing this Society on the National Board of Direction, the Chairman of the Representatives from this Society to the Illinois Engineering Council (so long as such council exists), and Representatives from each Chapter determined as follows:

Required Number of Corporate Members	Number of Chapter Representatives
Up to 100.....	1
101 - 300.....	2
301 - 500.....	3
501 - 700.....	4
701 - 900.....	5

Section 3. Each Chapter shall be entitled to one vote for each elected Chapter Representative, and an elected Chapter Representative or Alternate may cast all the votes for the Chapter.

Section 4. A majority of the Board Members shall constitute a quorum.

ARTICLE VII—OFFICERS

Section 1. The officers of the Society shall be the **President**, the three **Vice Presidents**, the **Secretary**, the **Treasurer** and together with the **National Directors** and the **Representatives** from this Society to the Illinois Engineering Council shall be elected by letter ballot for terms beginning at the close of the annual meeting as follows:

- a. The President and the three Vice Presidents shall be elected for one year.
- b. The Secretary and Treasurer shall be elected for a term of two years with the Secretary being elected to begin his term in even numbered years and the Treasurer elected to begin his term in odd numbered years.
- c. The National Directors and the Representatives to the Illinois Engineering Council shall be elected for three year terms.
- d. In the first regular election following the adoption of this Constitution the Secretary shall be elected for a one-year term, the Treasurer for a two-year term, one National Director and one Representative to the Illinois Engineering Council for a one-year term, one National Director and one Representative to the Illinois Engineering Council for a two-year term, and one National Director and one Representative to the Illinois Engineering Council for a three-year term. Thereafter all officers shall be elected in accordance with a, b, and c above.
- e. After the expiration of the term of the duly elected Chairman of the Representatives to the Illinois Engineering Council serving at the adoption of this Constitution, the President, subject to the approval of the Board, shall appoint one of the duly elected Representatives to the Illinois Engineering Council as Chairman, for a period of one year.

Section 2. To be eligible for nomination, election to or retention of an elective office of the Society or as a Chapter Representative, a member shall be in good standing. No member may hold two elected positions on the Board simultaneously.

Section 3. The Treasurer shall be bonded as determined by the Board.

Section 4. No member of the Board shall receive a salary or compensation except for expenses incurred in behalf of the Society as approved by the Board.

Section 5. Fees and expenses of persons serving the Society shall be allowed at the discretion of the Board.

Section 6. In the event the office of President becomes vacant or the President is unable to serve, the 1st Vice President shall become President for the unexpired term. All other vacancies in the elected offices, including the National Directors, shall be filled for the unexpired term by appointment by the Board.

Section 7. Duties of the officers shall be as defined in the Bylaws.

ARTICLE VIII—NOMINATION AND ELECTION OF OFFICERS

Section 1. The Nominating Committee shall be as defined in the Bylaws.

Section 2. Nominations shall be made for each elective office and no member of the Nominating Committee shall be eligible for nomination by the committee.

Section 3. Nomination and election procedures shall be carried out in accordance with the provisions of the Bylaws.

Section 4. Nominations by the Nominating Committee or by petitions must be made with the consent of the Nominee or Nominees.

ARTICLE IX—CHAPTERS

Section 1. The membership of the Society may be organized into chapters as authorized by the Board. Each Chapter thus formed shall have a minimum of ten National Members.

Section 2. The Board shall have authority to make rules and regulations for chartering, combining or dissolving Chapters.

Section 3. Each Chapter shall elect representatives and alternates to the Board of Direction as provided in Article VI of this Constitution. The regular term of office of a Chapter Representative shall be two years and shall extend from the close of one annual meeting to the close of the second following annual meeting of the Society, provided that when a chapter is organized its first representative shall be elected for a term of two years or less as the Board of Direction shall specify. Where a Chapter has two or more representatives on the Board, their terms shall be staggered so that all their terms will not expire at the same time.

Section 4. Each Chapter shall adopt a Constitution and Bylaws for its operation as it may deem proper, provided however that nothing contained therein shall conflict with or contravene the Constitution and Bylaws of the Society. Chapter Constitution and Bylaws and proposed amendments thereto shall be submitted to the Board of Direction for approval.

Section 5. A Chapter shall hold at least four meetings per year. A copy of the minutes of every meeting shall be submitted promptly to Society Headquarters.

Section 6. The charter of a Chapter may be revoked when the activities of the Chapter are not conducted in accordance with this Constitution or with the Constitution of the Chapter.

ARTICLE X—FUNCTIONAL SECTIONS

Section 1. The Board of Direction may authorize the establishment of functional sections, comprising members having common professional problems and interests, to operate under the Constitution and Bylaws of the Society.

Section 2. The scope of activities and the sphere of interest of each such section as set forth in the Functional Sections Constitution and Bylaws shall be submitted to the Board of Direction for approval.

ARTICLE XI—COMMITTEES

Section 1. Administrative Committees, standing committees and special committees shall be appointed by the President subject to the approval of the Board.

Section 2. The duties of the Administrative and standing committees shall be as defined in the Bylaws.

ARTICLE XII—HEADQUARTERS

Section 1. The location of the headquarters of this Society shall be determined by the Board.

ARTICLE XIII—BYLAWS

Section 1. The Board shall adopt Bylaws which shall govern all procedures under this Constitution including those of the Board and of the committees.

Section 2. The Bylaws may be amended by an affirmative vote of not less than two-thirds of all members of the Board provided, however, that the text of a proposed amendment shall be furnished to each member of the Board and to the President and Secretary of each Chapter at least thirty (30) days before the meeting at which a vote on the amendment will be taken.

ARTICLE XIV—AMENDMENTS

Section 1. Amendments to this Constitution may be proposed by a majority of the Board or by a petition signed by not less than one hundred (100) Corporate Members of this Society.

Section 2. Proposed amendments to the Constitution shall be submitted together with a letter ballot to each Corporate member at the time ballots are submitted for the Annual Election.

Section 3. An amendment shall be adopted only upon affirmative vote of two-thirds of the votes cast by the Corporate members provided not less than 20% of the Corporate Members cast affirmative ballots.

ARTICLE XV—EFFECTIVE DATE

Section 1. This constitution shall supersede the present Constitution as revised September 1, 1957, and shall become effective upon its adoption by the voting members of the Society.

Section 2. All elected incumbents serving the Society shall continue to serve in their respective offices until the conclusion of the first annual meeting following the adoption of this Constitution.

Section 3. Officers-elect elected at the time of the adoption of this Constitution shall assume the offices to which they are elected except that the Secretary-Treasurer-elect shall become the Secretary-elect. At the first subsequent meeting of the Board, the Board shall nominate candidates for the newly established Vice Presidential and Treasurer positions. The election of these candidates shall follow the procedures established under Sections C, D, and E of By-law III.

Section 4. Presently authorized chapter Constitutions shall remain in effect until revised or amended within the provisions of this Constitution.

Section 5. This section and Sections 2, 3, and 4 of this ARTICLE shall be automatically dropped from the Constitution at the conclusion of the first annual meeting after adoption of this Constitution.

BY-LAWS

BY-LAW I—ANNUAL MEETING

A. The annual meeting of the Society shall be held at the time and place determined by the Board and it shall be officially announced to the members at least six months preceding the meeting.

BY-LAW II—DUES

A. Dues shall be payable annually in advance on January 1 at the State Headquarters office. Chapter dues shall be disbursed quarterly by the State office to the Chapters to which the payers belong the quarters ending January 31, April 30, July 31, and October 31.

B. Persons admitted to the Society between December 1 and June 30 inclusive shall pay full year's dues. Persons admitted between July 1 and November 30 inclusive shall pay a half year's dues.

C. Each member is obligated to pay all dues until he has resigned or been expelled, or has been excused from payment by the Board.

D. A member whose dues are in arrears, without satisfactory explanation to the Board, for 18 months shall be dropped from the Society.

E. A person shall be considered in good standing if his dues are remitted prior to the close of December 31, of the year in which such remittance is due, unless otherwise ruled by the Board.

BY-LAW III—NOMINATION AND ELECTION PROCEDURES

A. The nominating committee, as defined in Bylaw VIII, shall act at least six months prior to the annual meeting.

B. The nominating committee shall file its report with the Secretary, and it shall be published in the ILLINOIS ENGINEER at least five months prior to the annual meeting. Nominations, petition, signed by not less than fifty Corporate members, shall be filed with the Secretary not later than four months prior to the annual meeting.

C. Letter ballots with envelopes for returning marked ballots shall be mailed not later than three months before the annual meeting to all corporate members. Provisions shall be made for the ballot for write-in candidates for each office to be filled.

D. In order to be valid, ballots shall be returned to the Secretary in two sealed envelopes. The outer ballot envelope shall be marked BALLOT, bear the signature of the Corporate member and shall be delivered to the tellers unopened.

E. The polls shall close at 12:00 noon on the eighth Monday preceding the annual meeting. The ballots shall be counted by not less than three tellers appointed by the President. The candidate receiving the largest number of votes shall be declared elected. In case of a tie for any office the Corporate Members attending the annual meeting shall elect the officer from the persons so tied.

BY-LAW IV—ADMISSION & EXPULSION

A. Every application for admission shall be submitted to the Secretary of the Society and by him to the Board of Direction, which shall have power to admit the applicant and to assign his grade of membership.

B. Candidates for admission shall make application in writing on a printed form provided by the Society. Applications of persons qualified for a membership grade by registration need not bear references. All other applications shall bear references of at least three members in good standing, each of which must have a grade of membership at least as advanced as that of the applicant under consideration.

C. Student, Engineer-in-Training and Affiliate members shall be automatically transferred into advanced membership classification as soon as they have qualified for this change. The difference in dues for this advanced membership shall become payable upon the change and they shall be billed accordingly by the Society.

D. Names of candidates for honorary membership may be proposed either by the Board of Direction or by written petition to the Board, signed by not less than 100 Corporate Members. Names of candidates approved by the Board shall be submitted to the Corporate membership for election by letter ballot. Favorable votes of 2/3 of the members voting shall be required for election; however, to be elected, ballots shall have been received from at least 10% of the Corporate members.

E. A person who has been dropped from the Society because of delinquent dues may be readmitted by the Board of Direction, subject to payment of any fees required by the National Society.

F. The Board of Direction shall consider the expulsion of a person belonging to the Society and if circumstances appear to warrant action, the Board shall prepare confidential charges and shall submit them to the person. He may present a defense, either in person or in writing, to the Board of Direction at a meeting of which he shall receive due notice. Affirmative votes of two-thirds of the members of the Board present and voting shall be required to expel. If three-fourths of the Executive Committee of a Chapter recommend to the Board of Direction of the Society the expulsion of a person belonging to the Chapter, or if the State Committee on Ethics and Practice recommends to the Board the expulsion of a person belonging to the Society, the Board must proceed in accordance with the above provisions of this section. In case of expulsion the Board shall notify the person and the Society.

BY-LAW V—DUTIES OF OFFICERS

A. The President, Secretary, and Treasurer shall perform the duties usually pertaining to their offices. The President shall preside as Chairman of the Board of Direction and, subject to approval of the Board, shall appoint the committees as defined in Bylaw VIII and such other committees as the Board may deem necessary.

B. The 1st Vice President shall preside in the absence of the President and shall be administrative head of the Operations Group of Committees; the 2nd Vice President shall be the administrative head of the Professional Group of Committees; and the 3rd Vice President shall be the administrative head of the Public Relations Group of Committees.

C. The Secretary shall be the liaison officer between the Board and the Executive Director. The Secretary shall also be custodian of the property of the Society and shall deliver it to his successor. He shall present a report on the affairs of the Secretary's office at the annual business meeting of the Society; he shall assure the proper recordings of the proceedings and discussions of the

Annual Meeting, meetings of the Board of Direction and Executive Committee and shall check to assure that copies of them are prepared and distributed to the Board. He shall be ex officio librarian of the Society and as such shall collect and preserve all books, pamphlets, papers and documents belonging to the Society.

D. The Treasurer shall serve as Comptroller of the Society and as such shall countersign all checks for expenditures budgeted and approved by the Board of Direction. He shall be responsible for the accounts of the financial affairs of the Society and shall present an annual report of all receipts and disbursements at the annual meeting of the Society.

E. The Directors from this Society to NSPE and the Chairman of the Representatives from this Society to the Illinois Engineering Council shall represent the ISPE to those organizations and they shall reflect the views of the ISPE as expressed by the ISPE Board.

BY-LAW VI—DUTIES AND RESPONSIBILITIES OF THE EXECUTIVE DIRECTOR

A. An executive director may be retained by the Board of Direction as a full-time employee of the Society.

The duties of the executive director are as follows:

- (1) Manage the ISPE state office and conduct the routine business of the Society.
- (2) Manage the business affairs of the ILLINOIS ENGINEER, a monthly publication. Solicit articles, items of interest, and advertising for the magazine.
- (3) Supervise one or more assistants who are expected to perform the routine duties.
- (4) Develop programs of action, both within the Society and outside, which may be to the interest and welfare of the Society. This includes the development of programs for obtaining new members.
- (5) Coordinate the activities of local chapters and committees of the state organization.
- (6) Call attention of the proper officers, committee members and other members affected by the actions and requests of the National Society on the one hand and the state chapters on the other.
- (7) Present talks before various organizations explaining the broad field of professional engineering.
- (8) Call on industrialists, public utilities executives and other large employers of engineers to promote their interest and participation of their engineers in ISPE affairs.
- (9) Prepare articles, leaflets, and other literature expounding ISPE-NSPE principles.
- (10) Work with legislators, insofar as possible, so as to add the voice of the professional engineer to the record on bills that are of interest mutually to the public and the professional engineer.
- (11) Participate in the promotion of various educational and public relations activities such as Engineers' Week, refresher courses, vocational counseling, professional development and professional unity.
- (12) Arrange all details for meetings of the executive committee and the Board of Direction of the state society.
- (13) Record and distribute the minutes of meetings of the Board and the Executive Committee.
- (14) Maintain adequate records on other subjects.
- (15) Assist officers in performing their duties.

BY-LAW VII—BUSINESS PROCEDURE

A. All meetings of the Society shall be governed by "Robert's Rules of Order Revised."

B. The order of business shall be fixed by the Board of Direction.

BY-LAW VIII—COMMITTEES

A. Administrative Committees.

The following administrative committees of the Society shall be appointed by the President with the approval of the Board.

(1) Executive Committee

The Executive Committee shall consist of the President as chairman, and members as follows: The latest available past president, the three vice presidents, the secretary, the treasurer and one national director. The Executive Committee shall administer the business of the Society between Board meetings. Action of the Executive Committee must be submitted to the next Board meeting for approval.

(2) Honors and Awards Committee

The Honors and Awards Committee shall have not less than 5 members including a past president, a present or past national director, a current member of the Board of Direction, and two members each from different chapters. This committee shall act as adviser to the Board and to the chapters in establishing and administering honors and awards programs.

The Honors and Awards Committee shall recommend for approval of the Board:

- Candidates for consideration as honorary members.
- Candidates for receipt of the Illinois Award.
- Candidates for honors or awards approved by the Board.

(3) Nominating Committee

The Nominating Committee for the election of Society officers and representatives shall consist of not less than seven (7) National Members. One member shall be a past president of the Society, two members shall be members of the Board and not less than four additional members shall be officers of different Chapters. All members of the Nominating Committee shall be from different chapters. The Secretary shall instruct the committee of the offices to be filled.

B. Standing Committees

- Standing Committees of the Society shall be organized under Operations, Professional and Public Relations groups with the designated vice president as the administrative head of each group. The following standing committees of the Society shall be appointed by the president subject to the approval of the Board. Each Committee shall have the power to appoint subcommittees.

Operations Group	Professional Group	Public Relations Group
Budget and Finance	Education	Building & Construction Codes
Chapter	Employment Practices	Civil Defense
Activities	Ethics and Practice	Inter-Professional Relations
Constitution & By-laws	Fees and Salaries	Publications
Functional Sections	Legislation	Public Relations Resolutions
Membership	Young Engineers	

- Appointments shall be made for 3-year terms except initial appointments may be made for 1, 2 or 3 years in order to provide appointments in approximately equal numbers to any one committee each year.
- Duties common to all standing committees shall include:
 - Preparation of interim and annual reports.
 - Submission of all policy matters for approval of the Board before implementation of procedures recommended by the Committee.
- The following outline of duties shall serve as a guide for individual committees:

C. Operations Group**(1) Budget and Finance Committee**

The Budget and Finance Committee shall

- Prepare a budget for control of expenditures and money by the state society.

- Review from time to time expenditures being made and compare these with the approved budget.

- Study the financial structure of the Society and recommend ways and means for improving the financial condition of the Society.

- The Budget and Finance Committee shall consist of the First Vice President as Chairman ex officio, the President, the Treasurer, and one other member of the Board of Direction. This Committee shall prepare an annual budget which shall be presented for consideration by the Board of Direction prior to beginning of each fiscal year and shall recommend revisions of the adopted budget when and as necessary. It shall advise the Board of Direction otherwise concerning the finances of the Society. It shall be responsible for the audit of the books of the Treasurer and shall report thereon to the Society at its annual business meeting.

(2) Chapter Activities Committee

The Chapter Activities Committee shall

- Encourage and assist chapters to undertake projects of interest to the state society as well as to individual chapters.
- Initiate, help to establish, and encourage new chapters.

(3) Constitution and Bylaws Committee

The Constitution and Bylaws Committee shall

- Maintain a continuing study of the constitution and bylaws and application of their provisions.
- Study carefully suggestions for revision and submit recommendations to the Board.
- Serve in an advisory capacity to the officers and committees of the Society in interpreting the provisions of the constitution and bylaws.
- Recommend specific specialized studies of the constitution and bylaws when deemed desirable.
- Advise the Board on constitutionality of proposed Chapter Constitutions and Bylaws and amendments thereto.

(4) Functional Sections Committee

The Functional Sections Committee shall

- Initiate, help to establish, and encourage new functional sections.
- Serve as adviser to functional sections.

(5) Membership Committee

The Membership Committee shall

- Promote ISPE before the entire profession in order to enlist endorsements, support and affiliation.
- Initiate, develop, and conduct membership campaigns.
- Cooperate with and advise chapters and their membership committees on effective methods for increasing membership.

D. Professional Group**(1) Education Committee**

The Education Committee shall

- Develop and sponsor programs to improve teaching of mathematics and the physical sciences as well as general subjects in the secondary schools.
- Promote projects for counselling effectively students indicating interest in engineering.
- Cooperate with engineering colleges in promoting professional concepts among engineering students, including establishments of student chapters where the opportunity exists.
- Encourage superior graduates of engineering colleges to pursue graduate study in engineering.
- Promote higher standards for engineering colleges.
- Promote continuing education for engineers.

(2) Employment Practices Committee

The Employment Practices Committee shall

- a. Study procedures and policies governing employment of professional engineers and make recommendations.
- b. Study inter-relationships of state and federal laws governing labor relations and the employment of professional engineers.
- c. Advise the legislation committee on pending legislation affecting employment practices and labor relations.
- d. Study existing and future supply of and demand for professional engineers.
- e. Cooperate with other professions and other engineering organizations in improving employment practices for professional engineers.

(3) Ethics and Practice Committee

The Ethics and Practice Committee shall

- a. Recommend means to improve ethical standards within the profession.
- b. Recommend means to improve and protect economic and professional interests of the engineer.
- c. Investigate and recommend to the Board disciplinary action for members of the Society who have violated the codes of ethics of the state or the national society.
- d. Investigate and recommend action to the Board in cases of violation of legislative acts of the state regulating the practice of professional engineering, structural engineering or land surveying.

(4) Fees and Salaries Committee

The Fees and Salaries Committee shall

- a. Prepare fee and salary schedules for guidance of the members of the Society.
- b. Seek new and better methods for establishing charges for engineering services.
- c. Clarify for both client and engineer the detailed services to be provided by the engineer for the fees included in the engineering services contract.

(5) Legislation Committee

The Legislation Committee shall

- a. Study legislation affecting registration laws covering the practice of professional engineering, structural engineering and land surveying.
- b. Recommend support for legislation at the local and state levels which will enhance the professional standing of the engineer.
- c. Cooperate with other professions and with other engineering organizations in recommending support for or opposition to measures of mutual interest.
- d. Draft, initiate and sponsor legislation desired by the members and the Board of Direction of ISPE.

(6) Young Engineers Committee

The Young Engineers Committee shall

- a. Encourage and assist young engineers to develop professionally.
- b. Initiate special studies of problems facing young engineers.
- c. Recommend policies and actions which reflect the attitude of young engineers.
- d. Devise methods of interesting young engineers in professional society activities.

- b. Make recommendations for approval or disapproval of pending codes.
- c. Serve as advisers to local governments in interpretation and enforcement of building ordinances.

(2) Civil Defense Committee

The Civil Defense Committee shall

- a. Encourage, aid, and cooperate with other professional organizations in developing procedures and standards for adoption at the local and state levels.
- b. Study and encourage the utilization of professional engineers in appropriate positions in the civil defense organization.

(3) Inter-Professional Relations Committee

The Inter-Professional Relations Committee shall

- a. Promote cooperation among professional engineers, structural engineers, architects, contractors and other professions.
- b. Promote better understanding and cooperation among engineering societies.

(4) Publications Committee

The Publications Committee shall

- a. Exercise general direction over the publication, editorial and advertising policies of the ILLINOIS ENGINEER.
- b. Serve as consultant and adviser to officers and committees in planning, financing and editing all publications issued by the Society.

(5) Public Relations Committee

The Public Relations Committee shall

- a. Plan and conduct a continuing campaign through all recognized media to cultivate a better understanding of the engineering profession.
- b. Plan and conduct special programs during National Engineers' Week.
- c. Establish a speakers' bureau and promote talks by Society members.
- d. Promote appointments of professional engineers to public commissions and other organizations.

(6) Resolutions Committee

The Resolutions Committee shall

- a. Initiate, study, and recommend appropriate action on subjects of concern to the state society.
- b. Serve as adviser on resolutions submitted to the Board of Direction by the Chapters.

F. Other Committee Appointments

The President shall appoint all other committees that may be required or desirable. Members of all committees shall be in good standing in the Society at the time of their appointment.

The Arkansas razorback is the meanest and toughest critter known to man. "One day," relates a native of the Ozarks, "a big boar found a case of dynamite and ate a dozen sticks of it. Then he wandered on up to our barn and just for pure cussedness bit our best plow mule.

"Quick as lightning the mule turned around and kicked him square in the stomach. Ordinarily it wouldn't have bothered the hog a bit but the dynamite went off; the corn crib was wrecked, windows broke for two miles around; and pieces of the mule came down in the next county.

"Believe you me, for the next few days, we had a mighty sick hog on our hands!"

E. Public Relations Group

(1) Building and Construction Codes Committee

The Building and Construction Codes Committee shall

- a. Cooperate with other professional organizations in development of building and construction codes.

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February 22-28, 1959

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COMING EVENTS

- Central Illinois—Election of Officers, Elks
Building, Decatur Dec. 11
- St. Clair—Ladies' Night Banquet and Installation
of Officers, Elks Club, Belleville Dec. 13
- Du Kane—Ladies' Night (Program by Auxiliary) . . . Dec. 18
- I.S.P.E. Board Meeting, Urbana Jan. 10, 1959
- I.A.C.E. Meeting—Chicago Jan. 17, 1959
- Lake County Chapter—Hanks Supper Club . . . Jan. 21, 1959
- I.S.P.E. Executive Committee—Peoria Jan. 30, 1959
- Chapter Officers Conference—Peoria Jan. 31, 1959
- N.S.P.E. Winter Meeting, Dinkler-Tutwiler Hotel,
Birmingham, Alabama Feb. 19-21, 1959
- ENGINEERS WEEK Feb. 22-28, 1959
- I.S.P.E. 74th ANNUAL CONVENTION
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